

## CHAPTER 2

### METHODS

The present investigation focused on the effect of gender, social class, sex role, self-concept and achievement motivation on the vocational aspirations of adolescents.

#### Objectives

The objectives of the present study were:

1. To find out the differences between the vocational aspirations of adolescent boys and girls.
2. To find out the effect of social class on the vocational aspirations of adolescent boys and girls.
3. To find out the effect of sex roles on the vocational aspirations of adolescent boys and girls.
4. To find out the effect of self-concept on the vocational aspirations of adolescent boys and girls.
5. To find out the effect of achievement motivation on the vocational aspirations of adolescent boys and girls.
6. To find out the effect of interaction between gender, social class, sex roles, self-concept and achievement motivation on the vocational aspirations of adolescent boys and girls.

## Hypotheses

Researchers are often drawn to the study of adolescence as they conceive adolescence as an exciting period of development, full of intense and dramatic behavioral changes. The scientific study of adolescence has increased tremendously in recent years in quantity and quality, because, besides being a distinct and important period in the life cycle of an individual, it marks, in certain respects, the peak in the physical and mental growth of an individual. This is also a period when one has to think about the educational subjects which are commensurate to one's vocational aspirations. In the present times, education is considered indispensable because it equips the adolescents of today to meet the challenges before them in future. It is a tool to realize their aspirations and find gainful employment.

Contemporarily, the traditional conceptions regarding the place and role of women have been gradually changing in our society. Increasing opportunities for modern education, greater geographical and occupational mobility and the emergence of new economic patterns are mainly responsible for this trend. The image of women is fast changing, yet it has been difficult to define or identify clearly the changing trends and shape of the image. Hence, the study of vocational aspirations of under-graduate girls is equally important as that of boys, as it gives an insight into their aspirations for social and economic status and reflects their changing value orientations.

The study streams, i.e., science and commerce/arts too have been considered as boys tend to opt for science based subjects whereas girls concentrate their efforts on arts subjects. On the whole more prestige is attached to the science field, and more effort, time and money is needed to

pursue science related vocations like medicine, engineering, and the like. Research evidence indicates that the educational aspirations and expectations of boys are higher than those of girls. In our society girls are typically brought up to aspire to a marriage and not to a vocation.

Sex roles are pervasive across the various domains of an individual's life, including the vocational world. In fact, one of the most striking characteristics of the vocational world is intense gender segregation. Men tend to work in some occupations, women in others, and from very early years, boys and girls tend to prefer and aspire for different vocations (Stockard & McGee, 1990).

Various studies on social class too have revealed a positive relationship between vocational aspirations and various measures of social status of the family. Social class has been most consistently associated with high vocational aspirations in case of girls as well as boys.

Self-concept and achievement motivation are specific determinants of vocational aspirations. Students high on self-concept scale opt for professional and other prestigious vocations. They might be more confident and generally more aware of achieving their goals. They perceive themselves as competent workers and take advantage of work opportunities necessary for development of skills. Many researches have shown that the academic performance of students depends upon their achievement motivation. Subjects who are higher in achievement needs are found to set harder goals and perform better than subjects who indicate lower achievement needs.

Thus, based on the trends indicated in the review of literature the following hypotheses were generated:

1. There will be significant differences between the vocational aspirations of adolescent boys and girls i.e., boys will differ from girls in their vocational aspirations.
2. There will be significant differences between the vocational aspirations of adolescent boys and girls belonging to different social class i.e., adolescent boys and girls belonging to different social classes will differ in their vocational aspirations
3. There will be significant differences between the vocational aspirations of adolescent boys and girls belonging to different sex role categories i.e., boys and girls from different sex role categories will differ in their vocational aspirations.
4. There will be significant differences between the vocational aspirations of adolescent boys and girls belonging to different categories of self-concept i.e., adolescent boys and girls belonging to different self-concept categories will differ in their vocational aspirations.
5. There will be significant difference between the vocational aspirations of adolescent boys and girls having different levels of achievement motivation i.e., adolescent boys and girls having different levels of achievement motivation will differ in their vocational aspirations.
6. There will be significant interactional effect between the vocational aspirations of adolescent boys and girls in relation to their gender, social class, sex roles, self-concept, and achievement motivation i.e., adolescent boys and girls belonging to different social class and different

sex role categories will be different in their self-concept, achievement motivation, as well as vocational aspirations.

### Sample

In the present study the focus was on adolescents from higher secondary standards, as the last three years of high school are very important for the selection of a vocation. These years also happen to be terminal points in the Indian education system.

The sample for the present study comprised of 600 adolescent boys and girls between the ages of 15 to 18 years. All the subjects were residents of Baroda city and came from the higher secondary sections ( i.e., 10<sup>th</sup>, 11<sup>th</sup> and 12<sup>th</sup> standards) of English medium schools. There are approximately 140 schools in Baroda city, 21 Municipal and 119 Private schools. For the present study, five English medium schools were selected on the basis of the following criteria:

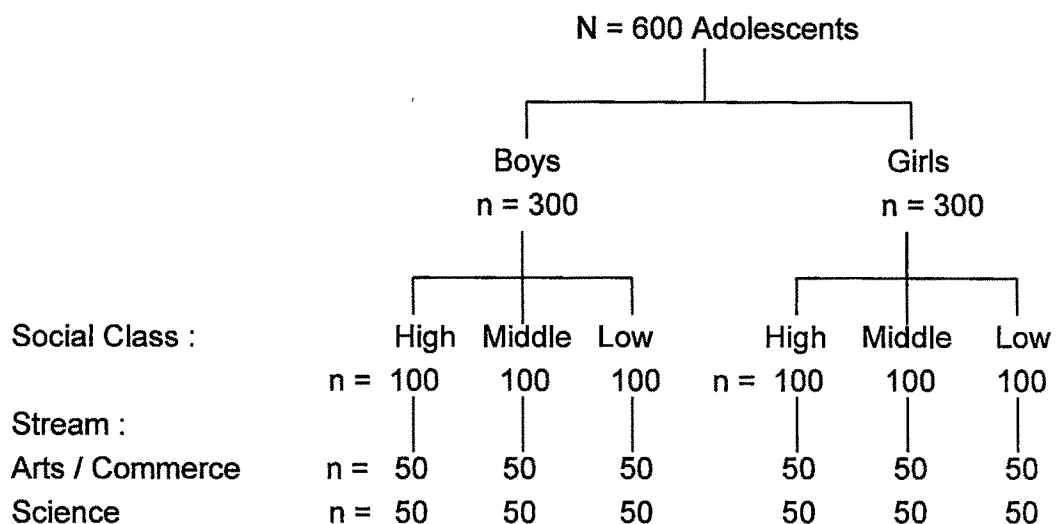
1. The medium of instruction was English.
2. All the schools were co-educational, i.e., there were girls as well as boys studying in the school.
3. All the schools either had science or arts / commerce stream, or both the streams.

The schools were selected from various areas of the city so that students from all the three social classes, namely, high, middle and low would be available.

1. Baroda High School. It is located in one of the posh areas of the city. The students in this school are usually from the high social class, their parents

- are well educated and usually hold executive posts or have their own business. It has only one stream, i.e., science.
2. Bright English Medium School. It is located at Karelibaug, and majority of the students hail from the higher middle and middle class. It has only one stream i.e., science.
  3. Basil School. It is located at Old Padra road and is a missionary school. Most of the students belong to higher middle and middle class. It has science as well as commerce streams.
  4. Sanskar Vidyalay. It is located at Fatehgunj and has students belonging to middle and lower middle class. It has science as well as commerce stream.
  5. Navyug School. It is located at Sama road and has students belonging to middle and lower middle class. It has only one stream, i.e., commerce.

The sampling design is given below.



## The Variables

The meaning and psychological relevance of the major independent and dependent variables under investigation have been discussed in the previous chapter. Given below are the explanations of the variables.

### Independent variables.

The five independent variables in the present study were:

1. Gender.
2. Social Class.
3. Sex Roles.
4. Self-concept.
5. Achievement Motivation.

1. Gender: Gender is a crucial determinant of the course of life of an individual, and the existence of sex differences has been documented quite extensively in the literature. The biological differences between the two sexes affect the development of specific psychological dispositions and reaction trends. Differences in the anatomy and functioning of hormones affect the behavior of the individuals differently and behavior is many times a function of the sex of the individual. In any society, certain differences are always observed between the typical personality characteristics of the two sexes. These sex differences are generally believed to be the result of differential child rearing practices of girls and boys. In our society, sex-appropriateness in behavior is greatly valued especially during adolescence. Males are expected to be instrumental and active, while females are expected to be expressive. No doubt then, the manner in which an individual aspires to a vocation is said to differ

between the two sexes. Vocational education in general assigns different values for boys and girls, i.e., the boy will become the primary wage earner of his family, whereas, girls are typically brought up to aspire to a marriage and not a vocation. Thus, in the present study too, an attempt will be made to study the gender differences in vocational aspirations of adolescents.

2. Social class: Social class may be defined as a group of people who share similar values and attitudes, a particular life-style and feel themselves to be similar to each other. The placing of an individual in a given social class system depends on his social relationships, his occupation, income, education, type of house and area of the community (Patel, 1989). People's perception of who they are and how they should behave are hence social in origin (Blau, 1975). A person's status in the society determines his view of the world and affects the way he or she behaves. Families belonging to different social class vary in their concepts of roles of parents and children, in family values, use of money, social conformity, etc. Thus, the type of vocations they aspire for is also affected. Adolescents belonging to different social classes aspire for vocations befitting their class, i.e., they keep in mind the facilities available, the prestige attached to the vocation, the feasibility of aspiring for the vocation and similar other factors.
3. Sex roles: Sex role is the sum of socially designated behavior for men and women. It refers to the constellation of qualities an individual understands to characterize males and females in his or her own culture (Block, 1973). The process by which the society transmutes males and females into "masculine" and "feminine" is known as the process of sex typing (Bem, 1981). An increasing number of career options are being made available to women across all ages, but especially to school and college going female students. No longer are



certain vocations like law, engineering and medicine blocked for females. Today's females are allowed more freedom in choosing their vocations. Therefore, in the present study research on sex roles will be significant as it influences the way an individual relates to oneself and to others in society.

4. Self-concept: Self-concept is the opinion an individual holds about himself, which may be favorable or unfavorable. These opinions include physical, social, educational, moral and intellectual aspects. These opinions, no matter how real or distorted they are, are held as powerful beliefs by the individual, and form his self-concept. Self-concept has assumed a central place in vocational development. Some students have an unrealistic concept of themselves, their levels of aspiration are far above their abilities and level of successful achievement, which bring in feelings of inadequacy. According to Super (1975), the process of vocational aspirations is essentially that of developing and implementing a self-concept. Therefore, self-concept is essential as far as vocational aspiration is concerned.
5. Achievement motivation: Achievement motivation is a learned motive, unconscious in nature, resulting from rewards or punishment of specific behavior. It is a drive whereby behavior involves competition, with a standard of excellence, and if successful, produces a positive effect or, if unsuccessful, a negative effect. It is a tendency to strive for success in situations involving an evaluation of one's performance in relation to some standard of excellence (Castenell, 1983). McClelland (1953) defines achievement as a concern for excellence in performance as reflected in competition with the standards set by others or over unique accomplishment or long term involvement. It is an important determination of aspiration, effort and persistence when an individual expects that his performance will be evaluated in relation to some

standards of excellence. It can be defined as how well a pupil compares with a given baseline.



### Dependent variable

Vocational aspirations: Vocational aspiration is what the individual considers to be the ideal vocation for him. It refers to the level at which an individual wishes to work. An aspiration is formulated solely in terms of the individual's wants and wishes, i.e., irrespective of the limitations imposed by reality (Crites, 1969). Aspiring for a particular vocation reflects to a certain extent the quality of life an individual wishes to lead, as work influences diverse aspects of one's life. The individual's status in the community is based on the esteem in which he is held, which in turn largely depends on the work he does and how well he does it. This evaluation by others will affect his self-esteem to a certain extent. Therefore, an individual's vocational aspirations have important implications, both, for his future as well as the society.

### Measures

In the present study, the measures used for the independent variables are :

1. Socioeconomic status scale (Desai, 1983 ).
2. Sex role inventory (Patel & Gon, 1989 ).
3. Self concept questionnaire (SCQ) (Saraswat, 1992).
4. Achievement motive test (ACMT) (Bhargava, 1985).
5. Occupational aspiration scale (OAS) (Grewal, 1984).

1. Socioeconomic status scale. In the present study the socioeconomic status of the sample was determined by Desai's scale which was developed in 1983 ( see Appendix A ). Each category includes specific items i.e., caste and sub-caste (for e.g., Bhangi, Chamar, Brahmin, etc.), occupation ranges from unskilled workers, laborers to managers, engineers etc.; education ranges from illiterate to Ph.D., M.Pharm. etc.; income ranges from less than Rs 300 to above Rs 10,000; residence ranges from pavement dwellers to bungalows; and vehicle ranges from a bicycle to car, station wagon, etc. Under each category there are specific items and each item carries a weight. These weights are added to get a final score and based on the score, the person is placed in any one of the three social classes, high, middle or low . There were five levels of social classes with the following corresponding scores: high (26-35 and above), high middle (21-25), middle (16-20), low middle (11-15), and low (0-10). The above levels were condensed to three levels in the present study as follows : high (26 - 35) and high middle (21 - 25) were taken as high (i.e., 26 and above). The middle range remained the same (i.e., 28 - 18). Low middle ( 11 - 15 ) and low ( 0 - 10 ) were taken as low (17 and below). The final judgment of the subjects' social class was based on the occupational, educational and income levels of both parents.

2. Sex role inventory. The sex role inventory, developed by Patel and Gon in 1989, contains 32 personality characteristics (see Appendix B ). Out of these, 16 characteristics are stereotypically masculine (e.g., adventurous, independent) and 16 characteristics are stereotypically feminine (e.g., adaptable, sensitive to others' needs). The scale range is from 1 (never or almost never true) to 7 ( always or almost always true) and hence, the individual's score also ranges from 1 to 7. The sex role inventory is essentially self-administering and may be given to individuals as well as to large groups. It takes about 10 to 15 minutes to respond to the scale. In the present scale individuals are categorized into one of the following four sex

roles based on the median split of the masculinity and femininity scores: (1) androgynous, (2) masculine, (3) feminine, and (4) undifferentiated.

The scale treats masculinity and femininity as two independent dimensions rather than as two ends of a single dimension, thereby enabling a person to indicate whether he or she is high on both dimensions (androgynous), low on both dimensions (undifferentiated), or high on one dimension but low on the other (either 'masculine' or 'feminine').

In order to establish the internal consistency of the inventory, Cronbach's alpha coefficient ( $\alpha$ ) was computed separately for the masculine and feminine items. The alpha coefficient for masculinity is 0.79 and for femininity is 0.85.

3. Self-concept questionnaire. The self-concept inventory developed by Saraswat (1992) provides six separate dimensions of self-concept, viz., physical, social, intellectual, moral, educational and temperamental self-concept. It also gives a total self-concept score. The operational definitions of the self-concept dimensions measured are as follows :

- I. Physical: Individuals' views of their body, health, physical appearance and strength.
- II. Social: Individuals' sense of worth in social interactions.
- III. Temperamental: Individuals' views of their prevailing emotional state or predominance of a particular kind of emotional reaction.
- IV. Educational: Individuals' view of themselves in relation to school, teachers and extracurricular activities.
- V. Moral: Individuals' estimation of their moral worth; right and wrong activities.
- VI. Intellectual: Individuals' awareness of their intelligence and capacity of problem solving and judgments.

The inventory contains 48 items (see Appendix C). Each dimension contains eight items, and each item has five alternatives. Responses are obtained on the test booklet itself. There is no time limit but generally 20 minutes are sufficient for responding to all the items. The respondent is provided with five alternatives to give his responses ranging from most acceptable to least acceptable description of his self-concept. The alternatives or responses are arranged in such a way that the scoring system for all the items will remain the same, i.e., 5, 4, 3, 2, 1 irrespective of whether the items are positive or negative. If the respondent puts a tick mark for the first alternative the score is 5, for the second alternative the score is 4, for the third alternative the score is 3, for the fourth alternative the score is 2, and for the fifth and last alternative the score is 1. The summated score of all the forty-eight items provides the total self-concept of an individual. There were five categories with the corresponding scores, namely, high self-concept (33-40), above average self-concept (25-32), average self-concept (17-24), below average self-concept (9-16), and low self-concept (up to 8). For the present study the above five categories were condensed to two categories: relatively high and relatively low self-concept. A high score on this inventory indicates a higher self-concept while a low score indicates lower self-concept.

Reliability of the inventory was found to be .91. Experts' opinions were obtained to establish the validity of the inventory, in which 100 items were given to 25 psychologists to classify the items as per the dimension to each indicator. Items of highest agreement and not less than 80 percent of the agreement were selected. Thus, the content and the construct validity were established.

4. Achievement motive test. The achievement motive test, developed by Bhargava (1984), measures the N Ach and is based on the lines following

the pattern of Dr. Bishwanath Mukherji and the method of sentence completion test.

The test consists of 50 items of incomplete sentences which are to be completed by the subject by putting a tick mark on any one of the three alternative responses given against each item(see Appendix D). The subjects are instructed about what they have to do and are required to check the item by choosing one of the alternative responses which indicate their feelings with respect to the aspect referred by. A special feature of the test is that items are repeated more than once in order to know the level of consistency with which the subject is answering the test. Similar responses on similar test items indicate the consistency in responding to the test. The usual time which is needed for administering the test is 30 minutes including the time needed for giving instructions.

The scoring is done with the help of a scoring key. Each item indicating achievement motivation (N Ach) is given a scoring of 1 and the total score earned on all the items is the N Ach score. There are five categories with corresponding scores namely, high (23 and above for boys and girls), above average (19-22 for boys and 20-22 for girls), average (17-18 for boys and 17-19 for girls), below average (15-16 for boys and 14-16 for girls) and low (11-14 for boys and 11-13 for girls). In the present study the categories have been condensed to three, i.e., high (23-50 for boys and girls) , average (15-22 for boys and girls) and low (0-14 for boys and girls). Test-retest reliability after an interval of one month was .87 and by comparing the responses on similar items it was 0.79. Considering the responses if they indicate to measure the same aspects for which they are intended to measure, it was found that they did so. As far as validation was concerned it was found that the test scores on this test had an agreement of .80 with the test scores Sentence Completion Test of Dr. Bishwanath Mukherji and an agreement of .75 with Educational Achievement Test (General).

5. Occupational aspiration scale. A scale for measuring the Level of Occupational Aspiration ( LOA ) was developed by Haller and Miller (1967) on the basis of rank ordering of 90 representative occupations out of a list prepared by the National Opinion Research Center (NORC, 1947) of the USA. The present scale was adapted by Grewal (1984) by getting the prestige rating of 150 occupational titles, identical with the NORC list (see Appendix E) . These titles were taken from the Dictionary of Occupational Titles of India. The number was reduced to 108 by a panel of judges who were involved in different occupations. The final list was administered on 200 persons who were asked to rate each occupation on a five-point scale ranging from an occupation of 'excellent' to 'poor' standing.

The occupational titles for each item have been used only once in the scale. Responses are scored with the help of a scoring key, and the score of each item ranges from "0" (lowest) to "9" (highest). A score of 9 indicates that a job from among the highest eight prestige occupations has been preferred and a score of "0" indicates that one of the lowest eight occupations has been preferred. An individual's score for the whole inventory ranges from 0 to 72. The scale can be administered in a group testing situation and half an hour is sufficient for the administration of the test. Coefficient of stability by the test-retest method was found to be 0.84. The Occupational Aspiration Scale has been validated against Haller and Miller's Occupational Aspiration Scale, and the coefficient of validity was 0.75.

### Procedure of Data Collection

The present study was conducted in the following three phases:

Phase I: A pilot study was conducted on a representative sample of 30 subjects to test the suitability and applicability of the tools used in the present study. The pilot study revealed that the tools were found to be suitable. In the case of the Sex Role Inventory, however, it was found that some of the personality traits (characteristics) had to be explained in simpler terms or given equivalent meanings in the local language. The necessary changes were made before the actual data collection.

Also, the Deo-Mohan projective test of Achievement Motivation (set of cards) (N - Ach) was initially administered to the students. The test consisted of five pictures in two separate sets for boys and girls. The traditional TAT type content analysis system of scoring was to be adopted. However, as the pictures lacked clarity, the adolescents faced problems in comprehending the tasks that were being performed in the pictures. It was therefore, decided not to use the test. Finally, the Achievement Motive Test by Bhargava (1985) was used after translating it from Hindi to English.

Phase II: Principals of different schools were contacted personally and the time and place for administering the tools was scheduled according to the convenience of the classroom teachers.

Phase III: For the purpose of the actual study, the investigator met the students in small groups in their classrooms. The students were classified into the three social classes based on Desai's Socio-Economic Status Scale. The booklet containing the other scales (namely, sex role inventory, self-concept scale, achievement motivation scale and the occupational aspiration scale) was distributed among the subjects. The



subjects were assured that their responses would be treated as confidential. They were asked not to discuss the tools amongst themselves, and the need for "individual opinion" was stressed. On completion, the booklets were closely scrutinized. Incomplete, wrongly filled or copied answers were eliminated from the data set.

### Plan of analysis

The statistical techniques used to analyze the data are stated below :

T - tests were computed to find out

- if there was any significant gender difference in the vocational aspirations of adolescents
- if there was any significant difference in the vocational aspirations of adolescents with relatively high and relatively low self-concepts
- If adolescents from the two different streams of study, namely, arts/ commerce and science, differed significantly in their (a) self-concept (b) achievement motivation (c) vocational aspirations.

One way Analysis of Variance ( ANOVA ) were computed to find out

- the relationship between the vocational aspirations of adolescents and their sex roles (i.e., androgynous, masculine, feminine and undifferentiated)

- the relationship between the vocational aspirations of adolescents and their social class (i.e., high, middle and low)
- the relationship between the vocational aspirations of adolescents and their achievement motivation (high, average and low).

A chi - square and contingency coefficient was computed to find out the relationship between stream of study ( i.e., arts /commerce and science ) and sex roles ( i.e., androgynous, masculine, feminine and undifferentiated).